application which resulted in the substitute specification.

IN THE CLAIMS

Cancel claims 1-16 without prejudice. Add new claims 17- 42 as follows:

17. A method for operation of an electrophotographic printer or copier device in which an optical character generator illuminates a photoconductor with at least one light source, comprising the steps of:

generating light encoding data from print data of a print image, the light encoding data respectively contain one of at least three different light encoding values that are allocated to different reference illumination energy values;

utilizing the reference illumination energy values for printing when the photoconductor has a predetermined reference discharge characteristic indicating a relationship of illumination energy and potential on the photoconductor;

considering a discharge characteristic indicating the relationship of illumination energy and potential on the photoconductor in a balancing event in a definition of corrected illumination energies;

determining in a balancing event the corrected illumination energy to be emitted by the character generator respectively for each light encoding value dependent on a deviation of the discharge characteristic from the reference discharge characteristic given a potential that belongs to the reference illumination energy employed according to the reference discharge characteristic given the respective light encoding value, wherein a value of the respective corrected illumination energy deviates all the more from a value of the reference illumination energy belonging to the same light encoding value the greater the deviation of the characteristics from one another is given the potential belonging to the respective light encoding value according to the reference discharge characteristic.

18. A method as claimed in claim 17, further comprising the step of: determining one correction parameter for each of said light encoding values; and calculating the corrected illumination energy values for the appertaining light encoding values with said correction parameters.

19. A method as claimed in claim 17, further comprising the steps of: acquiring the discharge characteristic completely or in points; prescribing a photoconductor potential for each of said light encoding values; and determining the corrected illumination energy respectively from the discharge characteristic for said light encoding value for the predetermined potential.

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20. A method as claimed in claim 19, further comprising the step of: utilizing a mathematical model for the discharge characteristic of the photoconductor.

21. A method as claimed in claim 20, wherein said mathematical model is:

$$\mathbf{VD(K,T,H) = (VC\text{-}VLIM) \cdot exp(-K \cdot T \cdot H) + VLIM,} \quad (1)$$

wherein

VC is a charge potential of the photoconductor in volts,

VD is a discharge potential of the photoconductor in volts,

VLIM is a lowest obtainable discharge potential in volts,

H is an illumination energy in $\mu Ws/cm^2$,

T is a currently acquired temperature of the photoconductor in °C,

K is a photoconductor class in $cm^2 / (\mu Ws\,°C)$, and

exp is an exponential function.

22. A method as claimed in claim 17, further comprising the steps of:
determining said discharge characteristic completely or in points;
prescribing a photoconductor potential for at least one of said light encoding values;
determining said corrected illumination energy from the discharge characteristic for the predetermined potential; and
determining the corrected illumination energies for other light encoding values by estimates.

23. A method as claimed in claim 22, further comprising the step of:
utilizing a mathematical model for the discharge characteristic of the photoconductor.

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24. A method as claimed in claim 23, wherein said mathematical model is:

$$\mathbf{VD(K,T,H) = (VC-VLIM) \cdot exp(-K \cdot T \cdot H)+VLIM,} \quad (1)$$

wherein

VC is a charge potential of the photoconductor in volts,
VD is a discharge potential of the photoconductor in volts,
VLIM is a lowest obtainable discharge potential in volts,
H is an illumination energy in $\mu Ws/cm^2$,
T is a currently acquired temperature of the photoconductor in °C,
K is a photoconductor class in $cm^2 / (\mu Ws°C)$, and
exp is an exponential function.

25. A method as claimed in claim 17, further comprising the step of:
taking the discharge characteristic into consideration in at least one regulating or control event, including determining the corrected illumination energy for

the light encoding value such that a potential predetermined for the light encoding value or a potential lying close to this potential arises on the photoconductor given an illumination according to the light encoding value and an appertaining corrected illumination energy.

26. A method as claimed in claim 17, further comprising the step of: considering a development characteristic indicating a current relationship of potential on the photoconductor and toner deposit in said determining step of the corrected illumination energies and/or of further printing parameters.

27. A method as claimed in claim 17, further comprising the step of: determining further printing parameters, including considering a development characteristic indicating a current relationship of potential on the photoconductor and toner deposit.

28. A method as claimed in claim 26, further comprising the steps of: applying a plurality of toner marks with different rastering; and acquiring the toner deposits in the region of the toner marks.

29. A method as claimed in claim 28, wherein said step of acquiring utilizes a sensor to acquire the toner deposit in the region of the toner mark in integrating fashion.

30. A method as claimed in claim 17, further comprising the steps of: applying at least one toner mark onto one of the photoconductor and a carrier material utilizing the corrected illumination energies; acquiring a toner deposit in a region of the toner mark; and

prescribing at least one further printing parameter that influences at least one of a development process and an illumination process dependent on the toner deposit.

31. A method as claimed in claim 30, wherein said step of acquiring is by one of an optical sensor and a capacitative measuring sensor.

32. A method as claimed in claim 30, further comprising the step of:
applying a plurality of toner marks with different rastering; and
acquiring toner deposits in a region of the toner marks.

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33. A method as claimed in claim 30, wherein said step of acquiring acquires the toner deposit in the region of the toner mark by a sensor in integrating fashion.

34. A method as claimed in claim 17, further comprising the step of:
considering only a section of at least one of the illumination characteristic and the development characteristic.

35. A method as claimed in claim 17, further comprising the step of:
automatically implementing the balancing event.

36. A method as claimed in claim 35, wherein said step of automatically implementing is performed after a printer or copier device is turned on.

37. A method as claimed in claim 35, wherein said step of automatically implementing is performed after longer printing pauses.

38. A method as claimed in claim 35, wherein said step of automatically implementing is performed after longer printer operation.

39. A method as claimed in claim 35, wherein said step of automatically implementing is performed demand of an operator.

40. A method as claimed in claim 17, further comprising the steps of:

prescribing a potential value that should occur on the photoconductor given illumination according to the respective light encoding value for each light encoding value; and

utilizing the illumination energy value determined by the discharge characteristic given the potential predetermined for the light encoding value as the corrected illumination energy for a light encoding value.

41. A method as claimed in claim 17, further comprising the step of:

utilizing the reference illumination energy value prescribed for the appertaining light encoding value for the determination of a corrected illumination value.

42. An electrophotographic printer or copier device, comprising:

an optical character generator that illuminates a photoconductor with at least one light source;

a print data unit that generates light encoding data with at least three different light encoding values from the print data of a print image, the light encoding values being allocated to different reference illumination energies, the reference illumination energy values being employed for printing when the photoconductor has a prescribed reference discharge characteristic indicating the relationship of illumination energy and

potential on the photoconductor;

a drive unit for driving the light source dependent on the light encoding data; and

a correction unit in which a discharge characteristic indicating a relationship between illumination energy and potential on the photoconductor is taken into consideration in a determination of corrected illumination energies, the correction unit determining the corrected illumination energy for each light encoding value so that a value of a respective corrected illumination energy deviates all the more from a value of a reference illumination energy belonging to a same light encoding value the greater a deviation of the characteristic from the reference discharge characteristic is given a potential that belongs to the reference illumination energy employed for the respective light encoding value according to the reference discharge characteristic;

said drive unit driving the light source dependent on the corrected illumination energies.

A1 Cont'd

REMARKS

The foregoing amendments to the specification and claims under Article 41 of the Patent Cooperation Treaty place the application into a form for prosecution before the U.S. Patent and Trademark Office under 35 U.S.C. §371.